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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,498	07/25/2003	Gregory A. Steinlage	15-XT-6176 (GEMS-A 0130)	1497
27256	7590	05/05/2005	EXAMINER	
ARTZ & ARTZ, P.C. 28333 TELEGRAPH RD. SUITE 250 SOUTHFIELD, MI 48034			ARTMAN, THOMAS R	
			ART UNIT	PAPER NUMBER
			2882	:
DATE MAILED: 05/05/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/604,498	STEINLAGE ET AL.	
	Examiner	Art Unit	
	Thomas R. Artman	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16, 18-20 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 13 is/are allowed.
- 6) ☒ Claim(s) 1-9, 16, 18, 19 and 22-26 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Marioni (US 6,538,353).

Regarding claim 16, Marioni discloses a rotor assembly, including:

- a) a rotor core having slots and bars (squirrel cage design with an iron core having the slots and bars made of copper and placed in the slots), and
- b) a non-sprayed, non-corrosive sleeve (stainless steel), where the sleeve is in contact with, coupled over, and rotational with the rotor core (col.1, lines 17-23 and 62-64).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-9, 11, 12, 14, 15, 18, 19 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klostermann (US 5,056,126) in view of Takahata (US 6,838,798).

Regarding claims 1-4, 6-9, 12, 14, 15, 18, 19, 23 and 24, Klostermann discloses an imaging X-ray tube rotor assembly and a method of producing an imaging X-ray tube rotor assembly (Figs.4 and 5), including the formation of a rotor core at least partially from a magnetic non-corrosive iron-based material having at least 12% chromium (stainless steel portion 71) and having a plurality of slots integrally formed in the rotor core and having bars of a non-magnetic, highly-conductive material placed in the slots (copper bars of squirrel cage portion 72).

Further regarding claims 1 and 18, Klostermann does not disclose the practice of forming a sleeve produced from a non-magnetic, non-sprayed on, non-corrosive material directly over and in contact with, or rotational with, the rotor core.

Takahata teaches the practice of using such a sleeve, particularly a stainless steel (at least 12% chromium) protective sleeve 19 around a rotor core that has the high tensile strength to keep the rotor core from breaking at high rotational speeds, reduce corrosion (a primary function of stainless steel) and to cancel out harmful magnetic flux components for reducing noise and vibration (col.3, line 51, through col.4, line 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the rotor core assembly of Klostermann to have a non-magnetic, non-sprayed on, non-corrosive material directly over and in contact with the rotor core in order to improve high-speed strength, protect, and reduce noise and vibrations as taught by Takahata.

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With respect to claims 5, 11, 22, 25 and 26, Klostermann and Takahata do not specifically disclose oxidizing an exterior surface of the rotor assembly, or more specifically, the exterior surface of the sleeve. However, the surface becomes naturally oxidized upon exposure to air, where the chromium in the stainless steel oxidizes with air, thus forming a protected layer that defines why stainless steel is stainless, or corrosion resistant.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for Klostermann and Takahata to oxidize the outer surface of the stainless steel sleeve to improve the corrosion resistance of the sleeve.

Further regarding claim 26, oxidizing via a "greening effect" is essentially inherent, since the oxidation of stainless steel creates a somewhat green in color due to the oxidation (reaction with oxygen) of the chromium.

#### *Allowable Subject Matter*

Claims 10 and 13 are allowed for reasons as stated in the previous Office action, dated November 17<sup>th</sup>, 2004.

Claim 20 remains objected to as having allowable subject matter for reasons as stated in the previous Office action, dated November 17<sup>th</sup>, 2004.

#### *Response to Arguments*

Applicant's arguments with respect to claims 1, 16 and 18 have been considered but are moot in view of the new ground(s) of rejection.

However, some of the same references are used, and a clarification is necessary in view of the Marioni reference. Applicants assert that Marioni is not analogous art, at least because the rotor assembly is not used in an X-ray tube and because the US classification is different. The examiner respectfully disagrees on both counts.

First, it is true that the rotor assembly of Marioni is not used in an X-ray tube. However, this is not sufficient grounds for rendering the reference inapplicable. The rotor core design of Marioni is used primarily to reduce the amount of corrosion that takes place inside the motor. Though the motor is a water pump and an X-ray tube is in a vacuum, both applications need to reduce corrosion, and stainless steel is a useful material that is used prevalently in both applications for the exact purpose of reducing corrosion. Therefore, a common problem is solved by the rotor assembly design of Marioni, and therefore the reference is pertinent prior art applicable to the present application.

Second, it is true that the classification of Marioni is different, being classified in class 310, subclass 89. However, the examiner points out that the present application is classified in class 378, subclass 131, where subclass 131 involves X-ray sources that have means for moving the target. The subclass definition also provides additional areas to search, particularly "class 310, appropriate subclasses for electrical motor structure *per se*." These subclasses include 85-89, which deal specifically with means for making an electric motor resistant to a variety of environments. Further, the newly-cited reference, Takahata, is also from a similar set of subclasses in class 310, in the low 200s, which deal specifically with squirrel cage rotor designs and related rotor structures. Therefore, the subclass definition alone provides the examiner with a ready reference to find analogous art in other classes of the US classification system.

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*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kliman (US 6,274,962) teaches the practice of using a corrosion resistant, electrically-conductive outer sheath of a rotor core in order to protect against corrosion; however, the rotor is of a sheet design and not of a squirrel cage design, where electrically conductive materials already exist, and the use of an outer electrically-conductive sheet is not needed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas R. Artman whose telephone number is (571) 272-2485. The examiner can normally be reached on 9am - 6:30pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas R. Artman  
Patent Examiner



Craig E. Church  
Primary Examiner